DOCUMENT RESUME

ED 299 899 HE 021 868

AUTHOR Vincent, Vern C.; Dietz, Elizabeth M.
TITLE Teaching Financial Accounting via a Worksheet Approach.
PUB DATE Aug 88
NOTE 13p.
PUB TYPE Reports - Evaluative/Feasibility (142) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Accounting; Classroom Research; Classroom Techniques; College Instruction; Comparative Analysis; Higher Education; *Instructional Materials; *Teaching Methods; *Theory Practice Relationship; *Worksheets

ABSTRACT

A classroom research study investigated the effectiveness of an approach to financial accounting instruction that uses worksheets to bring together the conceptual and practical aspects of the field. Students were divided into two groups, one taught by traditional lecture method and the other taught with worksheet exercises and lectures stressing theory and technique. An accounting aptitude test was administered as the pretest, and a form of the American Institute of Certified Public Accountants Achievement Test was used as a posttest. Analysis of the results suggests that since the two groups were found to be significantly different in aptitude, based on the pretest results, the final differences in groups can not be attributed to the teaching method. However, the instructor's personal observations were that the worksheets had distinct advantages, enabling students to review the first semester of accounting while incorporating partnerships into the accounting cycle, promoting comprehension of corporate equity, clearly delineating certain important accounting distinctions, teaching the concept of bonds payable in a more visual manner, and aiding in the synthesis of information. The worksheet approach, which simulates audit work, proved to be an exciting new way to teach partnership and corporate accounting. (MSE)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED299899

TEACHING FINANCIAL ACCOUNTING VIA A WORKSHEET APPROACH

Vern C. Vincent and Elizabeth M. Dietz

The chasm between what is taught in the classroom and what is needed in the field to practice accountancy effectively is commonly cited as the major issue in accounting education today. Cloud (1971), Newman (1978), Singleton and Estep (1979), Schwartz (1980), Cossaboom and Cossaboom (1982), and Gross and Gross (1980), all confirm that this problem is widespread and implicitly suggest that universities investigate innovative teaching methodologies that would address the problem. Jensen and Arrington (1983) specified a need for more research in accounting education. Martin and Whisinant (1982) articulate the practitioners' dissatisfaction with deficiences in the training of newly graduated accountants. They state that while new graduates have a strong theoretical background they lack the basic workpaper techniques to even begin an audit. Poor worksheet preparation was a major complaint voiced by practitioners in a recent regional survey of sixteen accounting firms (Dietz, Kettering and Nichols; 1984). The study cited poor workpaper techniques and an inability to interrelate the various transactions of a business as a major deficiency in the education of new accounting graduates. Seventy-eight percent of those interviewed agreed that at least one year was required to train new accountants. They also suggested that a more application oriented teaching methodology be incorporated into the accounting curriculum. The "Cohen Report" also documented that "Formal education does not now adequately prepare students to meet the demands and risks of professional practice" (1978).

HE 021 868

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

VERN C. VINCENT

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Although most studies point to a lack of technical expertise in new accountants, there were some studies which found the grasp of theory to be lacking in new graduates. Kollaritsch and Stephens (1982) take the position that faculties have the responsibility of imparting accounting education and not accounting training. Cherry and Reckers (1983) also felt that accounting educators have focused too much attention on the techniques of accounting while neglecting the conceptual side of accounting. The proposed worksheet research is an attempt to successfully blend the two and produce a more technical and independent thinking accounting graduate.

PURPOSE

The purpose of this study is to provide accounting educators an evaluation of an alternative teaching methodology for the instruction of financial accounting. In particular, this study is an exploratory investigation to ascertain if teaching accounting via a worksheet concentration is effective in uniting academic theory with the day to day activities of the public accountant.

RATIONALE AND BENEFITS

The use of the worksheet as the central theme in teaching financial accounting has potential advantages. It can be used as the

means to unite and reinforce the various financial aspects of partnership and corporate accounting. Students should be able to see the relationship between classroom theory and practice techniques before they enter the profession. This interrelationship will thus satisfy the practitioner's complaints that new graduates require far too much training in basic accounting techniques. The worksheet emphasis in the classroom also provides instantaneous feedback to students as to their progress in their accounting studies and possibly a measure of their aptitude for the accounting profession. Success with the worksheet approach should produce accounting graduates who would be readily productive in the accounting profession.

PROCEDURES AND METHODOLOGY

The sample group originally involved eighty-two students in the second course of introductory accounting, referred to as Principles of Accounting II. However, refinement of the sample group was necessary to remove all students who were repeating the course in order to eliminate the bias of prior knowledge. By removing these students from the sample, experimental design control was also exercised over student persistence to pass the course. Partnership accounting, corporate accounting, long-term bond debt and investments, as well as the statement of change in financial position were taught using two teaching treatments: 1) Lecture with Worksheet emphasis (twenty-six students) 2) Lecture only (sixteen students). Students in the control group were instructed using the traditional

lecture method. Students in the experimental group were taught by inclass worksheet exercises and lectures stressing theory and technique.

Since students could not be randomly assigned to the two experimental groups, a pre-test was administered as a statistical control for initial student differences in regard to accounting aptitude and knowledge. The pre-test served as the covariate for an Analysis of Covariance Design in order to remove the influence of prior accounting knowledge. Analysis of covariance design allowed comparison of the adjusted post-score means based on the pre-test results. A .05 significance level was used to test for statistical significance. During the second week of a fifteen week course, the pre-test was given to each group. The post-test was not given until after the mid-term which allowed sufficient time for full coverage of the financial portion of the Principles II course. Most introductory accounting texts typically devote two-thirds of the material to financial accounting, (Meigs and Meigs: 1984; Pyle and Larson: 1984; Di Yanni; 1982), and one-third of the text to managerial accounting concepts. By so structuring the course, coverage of the financial portion of the course usually can be accomplished in the first half of a normal semester.

Neither the pre-test, nor the post-test was used in determining the course grade. Four exams, including the final exam, determined the student's course grade.

TESTING INSTRUMENTS

The pre-test was the "Accounting Aptitude Test" developed by the Psychological Corporation according to specifications set forth by the American Institute of Certified Public Accountants (AICPA). The aptitude test is designed for use early in the student's academic career. "It can be used for students who have had no accounting study or who have taken some accounting courses" (1984). The Normative Group data furnished by the AICPA's Testing Project Office revealed that of the 1,908 test population, 1,573 students, or 82 percent, had up to one year of accounting study. The group profile was in line with this study which tested students in the second semester of introductory accounting (Principles II). The Testing Project Office indicated a reliability factor of 0.88 in all students tested.

Achievement Test Level I - Form A was used as the post test because it "measures knowledge and understanding of financial accounting..." (Berton: 1983). This test was also developed at the request of the AICPA after a survey of practitioners and reflects the importance of using a worksheet in solving accounting problems. Of the three forms of the test--Financial Only, Managerial Only, and a Combination of Financial and Managerial--only the "Financial Only" was used as a post-test. The summary data for the Level I Achievement Test, Form A was based on a population of 7,131 students. The reliability factor reported by The Testing Project Office of the AICPA was 0.77. Both tests have acceptable content and predictive validity

coefficients. The use of standarized testing instruments also allows for comparing local results with national norms.

STATISTICAL RESULTS AND CONCLUSIONS

Tables I and II summarize the Analysis of Covariance design, showing that the initial aptitude level of the students to perform in accounting was statistically significantly different between the two groups. The variability, however, explained by the differences in the groups on the post-test was not statistically different.

The large amount of residual or error variation in this experiment suggests other unidentifiable factors are influencing the outcome of the post test results. Other than saying the aptitude test was important in explaining differences in post-test results little can be said regarding the effectiveness of the worksheet approach on improving financial accounting test results.

INSTRUCTOR'S PERSPECTIVE

Although the statistical analysis failed to demonstrate gains in academic achievement due to the worksheet approach, the instructor had some personal observations regarding the value of the pedagogy. The worksheet approach was the central focal point in the teaching of each concept in the course. Partnership accounting was introduced

TABLE I

Source of variation	Sum of Squares	df	Mean Square	F	Signf of F
Covariate	103.471	1	103.471	7.987	0.007
Pre-test	103.471	1	103.471	7.987	0.007
Main effects	9.761	1	9.761	0.753	0.391
Groups	9.761	1	9.761	0.753	0.391
Explained	113.232	2	56.616	4.370	0.019
Residual	505.268	39	12.956		
Total	618.500	41	15.085		

Table II shows the adjusted means after the influence for accounting aptitude has been removed from the post-test scores. Even though the experimental group had higher adjusted mean scores, no statistical difference existed.

Table II

	n	Adjusted Means
Control Group	26	20.10
Experimental Group	16	21.14

and during the second or third class period an in-class exercise was assigned which required the students to enter a trial balance for two partners on a worksheet. The worksheet enabled the students to review the first semester of accounting and at the same time incorporate partnerships into the accounting cycle.

Corporate accounting was especially relevant to the students using the worksheet. The relationship between a sole proprietor's capital, a partner's equity, and retained earning was more apparent because of the worksheet. By building and expanding on the accounts used in a partnership, the students began to comprehend how preferred stock, common stock, paid-in capital in excess of par, and retained earnings present corporate equity.

The worksheet is a teaching approach which clearly delineates the difference between sole proprietorship, partnership capital, and corporate equity. Small businesses frequently fail to make this distinction and will often maintain a retained earnings account and salary themselves when in fact they are sole proprietors. The accountant must be able to recognize and explain that if a sole proprietor holds himself out to be a corporation as would be the case with retained earnings, then he must be prepared to accept the consequences. The consequences would consist of corporate double taxation and Internal Revenue Service penalties which can be as much as twenty-five percent of the extra taxes.

Another observable benefit of the worksheet approach was the

effective means of teaching bonds payable. The concept of bond discount or premium has always been difficult to teach, but because of the step-by-step nature of the worksheet, students were able quickly grasp the amortization process. Common stock subscribed concepts were grasped more quickly by the students when they completed a worksheet with a trial balance pre-recorded on it. The students were exposed to the general ledger placement and account classification of stock subscription before the concept was discussed in class. The worksheet, therefore, served as a visual tool for introducing a troublesome equity concept. The same approach was used with treasury stock. By the time treasury stock was introduced the students were familiar with worksheet format, and it was easier to explain that although treasury stock has a debit balance it is not an asset, but it represents the company's own reacquired stock.

The statement of change in financial position is frequently taught using a worksheet approach but our method expanded the single worksheet into a series of sequential steps. The four-stage problem which emerged brought all the prior chapters together. The approach enabled the student to reinforce the ten column worksheet and then change to a four-column statement of changes analysis. The statement of changes is an ideal medium for a hands-on demonstration of the flexibility that is built into the worksheet process.

The worksheet proved to be an exciting and new way to teach partnership and corporate accounting. The hands-on approach was believed to be effective because it simulated the work which

accountants perform on an audit or when working up a tax return. Future research needs to be performed to determine if junior and senior students outperform their peers who did not receive instruction in the worksheet approach.

BIBLIOGRAPHY

"AICPA Accounting Testing Program," AICPA Publications, 1983-1984, New York, New York, p. 51.

Berton, Lee "News Report: New AICPA Test Measures Student's Accounting Aptitudes," Journal of Accountancy, Vol. 156, September 1983, pp. 12-14.

Carriere, Robert, Dieter, Richard, Kaplan, Craig, and Polansky, Robert, editors: "Round Table Discussion: Does Accounting Education Meet the Needs of the Profession?" Massachusetts CPA Review, Vol. 56, Spring 1982, pp. 19-23.

Cherry, Alan A. and Reckers, Phillip M. J., "The Introductory Financial Accounting Course: Its Role in the Curriculum for Accounting Majors," Journal of Accounting Education, Vol. 1, No. 1, Spring 1983, pp. 71-82.

Cloud, Charles Douglas, "An Experimental Study Comparing the Effectiveness of Programmed Instruction and the Conventional Method of Teaching First-Semester Principles of Accounting," (Doctoral dissertation, Arizona State University, 1971). University Microfilms, No. 71-9697.

Cossaboom, Shirley R. and Cossaboom, Roger A., "Bridging the Gap Between Business and Business Schools," Financial Executive, Vol. 49, September 1982, pp. 12-15.

Dietz, Elizabeth M., Kettering, Ronald C., and Nichols, Richard G., "A Practical Approach to Achieve Relevant Experience for Accounting Majors," unpublished survey, January 1984.

DiYanni, Edward F., "Practice and Education: Closing the Gap," The Journal of Accountancy, Vol. 152, August 1982, pp. 31-36.

Flaherty, Richard E., "The Core of the Curriculum for Accounting Majors," American Accounting Association presentation, 1979.

Gross, Beatrice and Gross, Ronald, A Review of Innovative Approaches to College Teaching, American Accounting Association, Sarasota, Florida, 1980.

Jensen, Robert E. and Arrington, C. Edward, "Accounting Education: Turning Wrongs into Rights in the 1980's," Journal of Accounting Education, Vol. 1, No. 1, Spring 1983, pp. 5-18.

Kallaritsch, Felix P. and Stephens, Ray G., "A New Look at Accounting Education," The Ohio CPA Journal, Vol. 41, Autumn 1982, pp. 195-198.

Martin, J. W. and Whisnant, Susan R., "Why Johnny Can't Audit," The CPA Journal, November 1982, Vol. 52, pp. 10-17.

Meigs, Walter B. and Meigs, Robert F., Accounting: The Basis for Business Decisions, Sixth Ed., New York, McGraw Hill, New York, 1984.

Newmann, Frederick L., "Narrowing the Breach," The CPA Journal, Vol. 49, October 1978, pp. 40-44.

Pyle, William W. and Larson, Kermit D., Fundamental Accounting Principles, Tenth Ed., Richard D. Irwin, Inc., Homewood, Il., 1984.

Reynolds, Isaac N., Sanders, Allen B., and Hillman, A. Douglas, Principles of Accounting, Third Ed., The Dryden Press, New York, New York, 1983.

Schwartz, Bill N., "Introducing Accounting Students to the Real World," The Women CPA, Vol. 42, April 1980, pp. 26-29.

Singleton, William R. and Esteep, Janet J., "Internship Requirements for Accounting Graduates," The Internal Auditor, Vol. 36, December 1979, pp. 41- 44.

Swieringa, Robert J. and Weick, Karl E., "An Assessment of Laboratory Experiments in Accounting," Journal of Accounting Research, Vol. 20, Supplement 1982, pp. 56-101.

The Commission on Auditors' Responsibilities, Report, Conclusions, and Recommendations, American Institute of Certified Public Accountants, 1978, pp. 87-92.